

College of Public Health News

January 24, 2017

Georgia Southern University

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Recommended Citation

Georgia Southern University, "College of Public Health News" (2017). *Public Health, Jiann-Ping Hsu College of - News*. 194.
<https://digitalcommons.georgiasouthern.edu/coph-news-online/194>

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Georgia Southern Applies Mixed-Methods Design in Community-Engaged Research

January 24, 2017



Georgia Southern participated in a collaborative, community-informed study using a mixed-methods approach to adapting an evidence-based intervention to meet the needs of Latinos with chronic disease and minor depression and their family members. Mixed-methods informed by community-based participatory research (CBPR) were employed to triangulate multiple stakeholders' perceptions of facilitators and barriers of implementing the adapted intervention in community settings. Community partners provided an insider perspective to overcome methodological challenges. The study's community informed mixed-methods: research approach offered advantages to a single research methodology by expanding or confirming research findings and engaging multiple stakeholders in data collection. This approach also allowed community partners to collaborate with academic partners in key research decisions. Thus, the current study supports the value for community-based, mixed-methods research in the development and/or adaptation of evidence-based interventions.

["Application of Mixed-Methods Design in Community-Engaged Research: Lessons Learned from an Evidence-Based Intervention for Latinos with Chronic Illness and Minor Depression,"](#) was published in *Evaluation and Program Planning*.

Dr. Moya Alfonso, Associate Professor of Community Health Behavior and Education at the Jian-Ping Hsu College of Public Health was one of the co-authors of this study.

Georgia Southern Evaluates the Efficiency of Treatment Comparison

January 24, 2017



The validity of statistical inference depends on proper randomization methods. However, even with proper randomization, we can have imbalanced with respect to important characteristics. In this paper, we introduce a method based on ranked auxiliary variables for treatment allocation in crossover designs using Latin squares models. We evaluate the improvement of the efficiency in treatment comparisons using the proposed method.

Our simulation study reveals that our proposed method provides a more powerful test compared to simple randomization with the same sample size. The proposed method is illustrated by conducting an experiment to compare two different concentrations of titanium dioxide nanofiber (TDNF) on rats for the purpose of comparing weight gain.

[“Evaluating the efficiency of treatment comparison in crossover design by allocating subjects based on ranked auxiliary variable,”](#) was published in Communications for Statistical Applications and Methods.

Yisong Huang, DrPH Biostatistics alumni at the Jiann-Ping Hsu College of Public Health at Georgia Southern University was the lead author and Dr. Hani M. Samawi, Professor of Biostatistics, Dr. Robert Vogel, Department Chair, Dr. Jingjing Yin, Assistant Professor of Biostatistics were co-authors.